Building Face Ageing Model Using Face Synthesis

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Abstract

Advancements in face synthesis technology have enabled innovative methods for modeling facial aging. This research paper focuses primarily on creating a robust face aging model using deep learning and Generative Adversarial Networks (GANs), trained on a diverse dataset of facial images. The proposed approach captures both global features and local textures to produce realistic age-progressed images while preserving the subject's identity. This paper also examines face synthesis techniques, with specific emphasis for the various practical usage of GANs. The key objective of our project is to upgrade both the discriminator and the generator parts of GANs to generate more realistic, age- progressed face images. We evaluated the model using quantitative metrics and qualitative assessments, demonstrating its effectiveness. Additionally, we address ethical considerations, proposing guidelines for responsible use. Our study offers a novel framework with significant applications in security, forensics, and entertainment, and suggests future research directions to improve accuracy and ethical standards.